

LENS MANUFACTURING METHOD AND SYSTEM, AND PROGRESSIVE LENS

ABSTRACT

A lens manufacturing method, in which a first photoresist is coated on a lens substrate; a photopolymerization reaction of the first photoresist is induced by a laser emitted from a laser system to lithographically form preset micro/nano structures on the lens substrate, thereby obtaining a lens having micro/nano structures arranged in a predetermined layout. The lens realizes a required refractive-index distribution through the micro/nano structures in the predetermined layout. A minimum feature size of the preset micro/nano structures is 50 nanometers. Second photoresists varying in refractive index are coated on the lens substrate followed by photopolymerization to at least form a first micro/nano structure set and a second micro/nano structure set varying in optical properties on the lens substrate. A lens manufacturing system, a progressive lens and a repair method are also provided.

Fig. 1